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Department of Nutrition and Dietetics

Healthy Eating for Diabetes in Pregnancy

What is Gestational Diabetes?

Gestational Diabetes is diabetes which appears for the first time during pregnancy. You may have tested positive for glucose in your urine. Most people then have a Glucose Tolerance Test (GTT) to confirm the diagnosis of Gestational Diabetes.

During pregnancy, hormones are produced which stop the hormone insulin from working as well as it normally would. This causes blood glucose (also known as 'blood sugar') to rise; some women don't produce enough insulin to overcome this, leading to Gestational Diabetes. It is important to control blood glucose levels to target levels to avoid weight and health problems for your baby at birth, and beyond.

What if I have Type 2 Diabetes?

If you already had Type 2 Diabetes before pregnancy, this information will help you to make good choices and give some guidance to help you regulate your blood glucose levels.

Summary of recommended diet if you have diabetes in pregnancy

- Avoid all drinks containing sugar – sugary fizzy drinks, fruit juices, fruit smoothies, milkshakes and sweetened coffees. Diet versions and unsweetened hot drinks are fine.
- Swap sugary and sweet snacks such as biscuits, cakes, sweets and chocolate for lower carbohydrate snacks such as nuts, pickles, vegetable sticks or very dark chocolate (80% cocoa content or more).
- Try to reduce portion size of starchy food at a meal to keep your blood glucose levels under the target level.

- It will help to have only 1 type of carbohydrate at a meal – have **either** potatoes, or bread, or pasta, or rice. Combinations, such as rice and chapatti, pie and potatoes, pasta and garlic bread, yam and rice and sweet potato, will usually cause blood glucose levels to go above target levels. Include more vegetables or salad to fill up your plate.
- Low glycaemic index (GI) starchy foods are more slowly absorbed and so a better choice (more information later).
- Include lots of vegetables and salads at meals and snacks – they have lots of fibre, vitamins and minerals and are low in carbohydrate.
- Fruit contains natural sugar – limit to 1 item at a time and preferably between meals.
- Include protein foods in your meals (more details later).
- Milk and dairy foods are a good source of calcium. Spread your milk over the day as it is also a source of lactose (a milk sugar, more details later).

Which foods cause blood glucose to increase?

Foods and drinks containing **carbohydrate** will cause your blood glucose level to rise. Both the **amount and type** of carbohydrate can affect your blood glucose levels.

Types of Carbohydrate

Sugary Foods

Consider swapping sugary foods for lower sugar options:

Sugary foods	Lower sugar alternatives
Sugar, brown or demerera sugars, icing sugar, fructose, Sugar Twin, Sugar Lite, molasses, jaggery	Artificial sweeteners such as sucralose, aspartame, stevia (avoid the blend or baking style sweeteners as they contain sugar too)
Jam, marmalade, honey, syrup, treacle, lemon curd, chocolate spreads, maple syrup	Low-sugar jam or marmalade, no-added- sugar fruit spread

Squash and fizzy drinks containing sugar, such as Lucozade, Ribena, Sunny Delight Fruit juices and smoothies. Flavoured water **may** contain added sugar (check the label) Milkshakes/Nesquick™.	Sugar-free squash, or sugar-free fizzy drinks (‘light', 'diet' or 'zero’), water, soda water, mineral water, slimline mixers, Ribena Light™ and C-Vit™ No-added-sugar Crusha™ added to milk
Drinking chocolate, malted milk drinks Watch out for sachets of coffee, many of which contain sugar or syrup. Tea, coffee with sugar	Tea, coffee granules, cocoa, low calorie hot chocolate drinks such as Options™ or Highlights™ drinks Tea, coffee with sweetener
Sweets, chocolates, toffees, mints, sugar-free sweets containing isomalt, Indian sweets such as burfi, jalebi, gulabjaman, halva, penda	Fresh fruit, sugar-free mints or sugar-free chewing gum
Tinned fruit in syrup, jelly, instant whips, yoghurts and puddings sweetened with sugar	Fresh fruit, tinned fruit in natural juice, puddings sweetened with artificial sweeteners, sugar-free jelly, sugar-free instant whip, natural or diet /light yoghurt e.g. Mullerlight™, Weight watchers™, Shape™, Irish Diet™, one scoop of ice cream
Sweetened condensed milk	Semi-skimmed evaporated milk

Try not to have foods or drinks with artificial sweeteners every day. Research shows that pregnant women drinking artificially sweetened drinks daily can increase the risk of asthma in their child/ren up to the age of 7 years.

Dairy Foods

- **Milk and yoghurts** contain a natural carbohydrate called lactose which will affect blood glucose if taken in large amounts. By **spreading these throughout the day** in moderate amounts there will be less effect on blood glucose levels, as the carbohydrate load is reduced.

- A lower carbohydrate alternative would be unsweetened plant based milks/yoghurts fortified with calcium.
- Cheese does not contain carbohydrates, but is high in saturated fat so keep to a small portion. A portion of cheese is a match-box size amount.

Fruits

- All fruit including fresh, frozen, dried and canned.

Fruit contains a carbohydrate called fructose. We recommend that you have some fruit daily, but only **one piece at a time.** Spread individual portions throughout the day, preferably in-between meals. Dried fruit contains concentrated sugar so smaller portions are advised. Please refer to the **snack list for a suggested portion guide**.

Starchy Foods

Starchy foods are broken down into glucose. The **amount eaten** in one sitting is important; the **more you eat, the greater the effect on blood glucose**. The GI of carbohydrates will have an effect on your blood glucose readings: eating lower GI foods may reduce the **speed** at which foods make the blood glucose level rise. Foods with a lower GI release their glucose slowly into the blood, helping to control blood glucose levels after a meal.

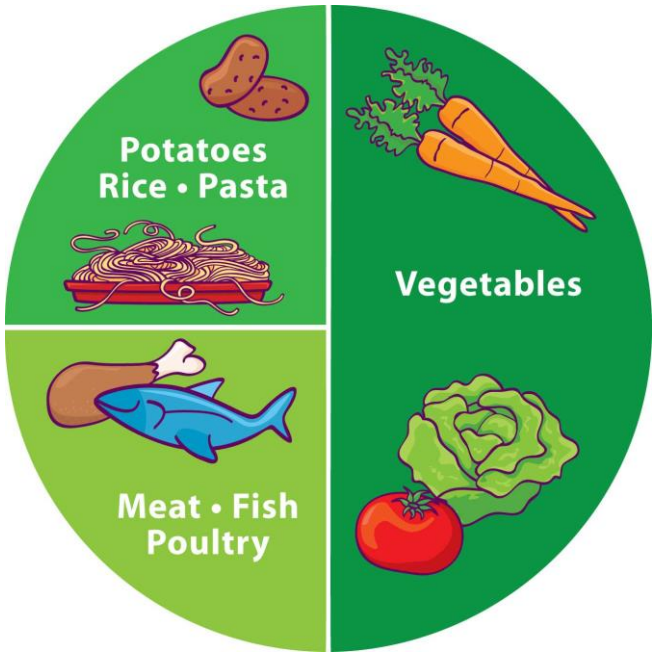
Examples of good swaps can be seen in the table below:

Higher GI foods - choose less often	**Slower release (lower GI) choices – choose more often**
Cornflakes, Rice Krispies™, sugar-coated cereals.	Whole oats, oatmeal, oat-based cereals, porridge oats (not instant), All bran™
White, brown or wholemeal bread, bagels, crumpets.	Multi grain bread (granary type), pitta bread, rye bread, sourdough bread Chapattis, oatcakes
Pasta (fresh, maize or corn pasta) Rice varieties- quick cook rice, jasmine or 'sticky' types Mashed or jacket potatoes	Dried pasta, made from wheat, noodles, basmati or long-grain rice, pearl barley, quinoa, buckwheat or bulgur wheat, sweet potato, new potatoes, roast potatoes (try to keep the skins on)

If your blood glucose readings are consistently high after meals (more than 7.8mmol/l one hour after meals), consider reducing your portion sizes of starchy foods. You can also try combining them with protein or a low GI food as this will reduce the overall GI.

How much starchy carbohydrate?

You may find it helpful to estimate starchy carbohydrate portions by comparing them (when cooked) to the size of your fist or about ¼ of your plate. If you are having bread as your starchy carbohydrate portion, this is equal to around 2 slices of medium cut bread, a roll the size of your fist or 1 chapatti.



Foods that have little effect on blood glucose levels:

Protein foods such as meats, fish, eggs and cheese do not directly affect blood glucose. Vegetarian protein sources include; lentils, pulses, beans, tofu, soya mince, Quorn and paneer.

Protein can help to fill you up for longer and help to slow down the release of glucose into the bloodstream if combined with carbohydrate-containing foods at mealtimes. We suggest choosing lower fat options where possible to help insulin work better e.g. 5% fat mince, removing visible fat from meat and low fat dairy options. Replacing animal sources of protein with soya can help your blood glucose levels.

Fats: high fat foods such as oils, margarines, cheese, cream, nuts, sugar free nut butter and avocado do not directly affect blood glucose levels. However, they are high in calories, so can lead to weight gain if taken in large quantities. High amounts of saturated fat (found in animal products), can make it more difficult for sugar to leave your blood. Choose lower fat options of cheese, cream and meat to help.

Vegetables and salads contain only small amounts of carbohydrate, which generally do not affect blood glucose levels; they also contain fibre and vitamins and are low in calories. These are a good food to have lots of, especially if you are trying to reduce other higher calorie foods. A variety of different coloured vegetables provides a wide range of different nutrients. It is a good idea to eat slightly smaller portions of the more starchy (higher carbohydrate) vegetables such as parsnips, butternut squash and sweet potato.

Beans, lentils and other pulses contain carbohydrate, but have little effect on blood glucose levels, as they are high in protein and fibre, making absorption very slow.

Snacking

When you have Diabetes you do not 'need' to eat snacks unless you have been advised to do so by your dietitian. However, if you are hungry in-between meals it is important to aim for healthy, low carbohydrate snacks to limit the effect on your blood glucose levels.

If you eat a snack with a food label, then check that **Total Carbohydrate** for the portion is **less than 20g.** The lower the carbohydrate content, the smaller the effect on your blood glucose level**.** Try to have just **one** carbohydrate-containing snack between meals.

Snacks containing 15-20g carbohydrates

- Small pot of light yoghurt, add unsalted nuts or a light sprinkling of dried fruit for an extra filling snack;
- Mini pizza – half a wholemeal roll, spread with pesto and load with tomato, mushrooms and a sprinkle of cheese then toast under grill;
- 1 mini pitta bread thinly spread with peanut butter (only avoid nuts if family history of nut allergy);

- Tinned sardines in tomato sauce on a slice of wholemeal toast or 2-3 crispbreads
- 2 Oatcakes covered with low fat cream cheese and topped with a few halved grapes, marmite or cucumber/celery
- 10 grapes or 2 plums or 2 satsumas or half a mango.
- A tablespoon of dried fruits or 3 dried apricots (these are very concentrated in sugar).
- 1 fruit, such as: a small banana, apple, orange, peach or nectarine

Snacks containing less than 10g carbohydrates

- Small pot of light/diet yoghurt or 120g plain, natural yogurt
- Sugar-free jelly
- A mug of 'light' hot chocolate / cup-a-soup / ⅓ tin tomato soup
- Any meat, fish, eggs, or vegetarian quorn substitutes
- Handful of unsalted nuts (only avoid peanuts if family history of peanut allergy) or handful of roasted soya beans/ seeds
- Low fat cheese stick and 1 piece of fruit
- Sliced avocado and cherry tomatoes
- Small bowl of unsweetened popcorn
- Raw veggie sticks such as carrot sticks, celery, cucumber, with a dip such as hummous, salsa, guacamole or garlic/herb cheese spread
- Handful of strawberries, blueberries, raspberries, blackberries, cherries
- Rolled ham & pineapple on sticks (2 pineapple rings)
- 2 squares of 80-90% cocoa chocolate

What happens after the baby is born?

Gestational Diabetes usually disappears after your baby is born, but is likely to come back in any further pregnancies. Women who have gestational diabetes have an increased chance of developing Type 2 Diabetes later in life, but this risk can be reduced through maintaining a healthy diet and lifestyle.

Vitamin supplements and pregnancy

Some supplements are advisable for **all** pregnant women. Speak to your GP or midwife about this:

- Folic Acid - to be taken up to 12 weeks in pregnancy for prevention of neural tube defects.
- Vitamin D is very important for the development of the foetus and for preventing rickets during childhood. During pregnancy a vitamin D supplement of 10 micrograms daily is recommended. This dose can also be continued whilst breastfeeding to maintain adequate vitamin D levels
- Iron- many pregnant women are prescribed iron supplements if their levels become low; these are best taken with a meal containing a source of vitamin C. Vitamin C is found in foods such as an orange, strawberries, kiwi fruit, peppers, broccoli and potatoes: these are better choices than drinking orange juice when you have diabetes. Be careful to not drink tea and coffee with meals if you need to increase your iron levels as it prevents absorption.

Useful contacts

Diabetes UK

Tel. 0207 424 1000 (reception)

Tel. 0207 424 1030 (care line)

Website: www.diabetes.org.uk

E-mail: infoscience@diabetes.org.uk

Diabetes Dietitians Coventry

Contact No: 02476 966161

Diabetes Dietitian Rugby

Contact No: 01788 663242

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